

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

AFFIDAVIT

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

Commissioner:

I, Robert E. Schneider, herewith affirm as follows.

(A) I was born on November 22, 1943; and I am a U.S. Citizen.

(B) I presently live at 1015 Central Avenue, Wilmette, Illinois 60091.

(C) In June 1966 I received a Bachelor's Degree in Electrical Engineering from Northwestern University, Evanston, Illinois; and

in June 1971 I received a Master's Degree in Electrical Engineering from ITT, Chicago, Illinois.

(D) I have practiced Electrical and Electronics Engineering since June 1966, as follows.

1. Between June 1966 and December 1968, as a Junior Engineer, I did engineering design work on class B stepped and quasi-square inverters at Vapor Corporation of Chicago, Illinois.

2. Between December 1968 and February 1970, as a Project Engineer, I did engineering design work related to power supplies and waveshaping circuits at SCM Kleinschmidt, Deerfield, Illinois.

3. Between March 1970 and January 1974, as Senior Project Engineer at Vapor Corporation of Chicago, Illinois, I was responsible for projects related to the design of aircraft controls and power supplies.

4. Between January 1974 and October 1976, as Program Manager at SCM Kleinschmidt in Deerfield, Illinois, I was responsible for design activities related to a microcomputer-controlled optical character reader.

5. Between November 1976 and August 1977, as Manager of design Engineering at Norlin Music in Lincolnwood, Illinois, I directed engineering activities related to the design of computer-based music instruction systems.

6. Between September 1977 and August 1979, as Group Manager at Extel Corporation in Northbrook, Illinois, I directed the activities of six engineers engaged in electronic product design activities.

7. Between September 1979 and January 1983, as Product Manager at Bell & Howell Company in Skokie, Illinois, I was responsible for the marketing of the Company's computer products.

8. Since January 1983 I have been in business for myself doing design and development work related to high frequency power supplies, microcomputer systems, and HVAC controls. During this period, about one third of my time has been spent on the design, development and construction of high frequency inverter-type power supplies, including ballasts for fluorescent lamps.

(E) In total, I have spent more than 10 years in the design, development, construction, testing and evaluation of electronic power supplies in general and electronic inverter-type power supplies in particular, and I have accumulated substantial experience in the art of power supplies, particularly electronic inverter-type power supplies and electronic inverter-type ballasts for fluorescent lamps.

Consequently, I believe I have at least ordinary skill in the art of electronic inverter-type power supplies and electronic inverter-type ballasts for gas discharge lamps.

(F) I have been informed to the effect:

(1) that the Commissioner rejected certain claims in an application for a patent for the reason that the Commissioner held the claimed invention to be obvious over prior art;

(2) that, as evidence of obviousness, the Commissioner cited the following prior art references, copies of which have been received by me:

U.S. Patent No. 4,184,128 to Nilssen; and

U.S. Patent No. 4,008,414 to Agnew;

(3) that the Commissioner held that the cited Nilssen patent, with particular reference to Fig. 8 thereof, when considered in view of the cited Agnew patent, rendered the claimed invention obvious;

(4) that the Commissioner held that by making certain obvious modifications of the teachings of the cited Nilssen and Agnew patents, and by making an obvious combination of the results of the two modified teachings, the claimed invention would result; and

(5) that the subject matter of the claimed invention pertains to the art of inverter-type power supplies and ballasting means for gas discharge lamps.

(G) I have not seen the application for patent identified in section (F) above, nor have I seen the claims thereof. More particularly, I have not received a description of the claimed invention.

(H) I have been requested:

(1) to carefully study and consider the cited references in light of the situation described in section (F) above;

(2) to identify each and every instance of what I see as obviously useful and attainable modifications and/or combinations involving the teachings of the cited Nilssen and Agnew references; and

(3) to express each one of those obviously useful and attainable modifications and/or combinations in writing.

(I) I have performed the study and consideration requested of me in section (H) above, having spent therefor an amount of time that I judged to be reasonable; and I herewith set forth in writing each and every one of those obviously useful and attainable modifications and/or combinations, as follows.

(1) Nilssen's Fig. 8 may be used as a ballast circuit by adding an inductor at output 211. This inductor could either be a separate component or built into the output transformer 207. If a separate inductor for each lamp or pair of lamps is used, many lamps could be driven by one inverter. This suggests an approach to an economical means for powering a bank of lamps as is often found in an office, lab or schoolroom.

(2) If isolation from the power line is not required, transformer 207 could be an autotransformer, thereby reducing cost and/or increasing efficiency.

(3) The features that are unique to the Agnew invention are the shorting switch and including a lamp filament in the feedback to prevent inverter failure while relamping. The inverter of Nilssen's Fig. 8 will not fail is unloaded and does not need the shorting switch or filament in the feedback loop.

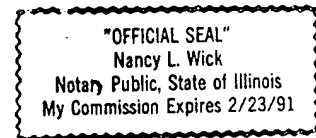
Robert E. Schneider

*Robert E. Schneider*

STATE OF ILLINOIS)

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COUNTY OF COOK )



SEAL

Sworn to and subscribed before me this 21st day of March, 1988.

*Nancy L. Wick*  
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Notary Public

My Commission Expires: 2/23/91